### II. REMARKS

Applicants respectfully request that this application be reconsidered in view of the above amendments and the following remarks.

# 1. Status of the Claims

Claims 40-74 are pending in this application. The Examiner has withdrawn from consideration Claims 41, 44, 45, 54, 60-62, 64 and 66.

In the above amendment, Claims 40-41, 44-45, 50-63, and 70 have been canceled. Claims 42-43, 46-49, 64-67, and 71-73 have been amended. Upon entry of the above amendments, Claims 42-43, 46-49, 64-69, and 71-74 are pending in this application.

#### 2. Election/Restriction

Applicants acknowledge that the restriction requirement has been made final. Applicants elected, as summarized by the Examiner on page 2 of the May 20, 2003 Office Action, "Restriction Group I, Claims 40-59 and 61-74 drawn to compounds of formula (I), formula (XXIX), or formula (XXX) where Y is heterocyclyl having one nitrogen atom as the only ring heteroatom, corresponding composition and method of use."

Based on Applicants' election, the Examiner has withdrawn Claims 41, 44, 45, 54, 60-62, 64, and 66 as being drawn to a nonelected invention. Applicants have amended Claims 64 and 66 to depend from Claim 42 such that Claims 64 and 66 may be rejoined with the elected invention. Claims 41, 44, 45, 54, 60-62 have now been canceled without prejudice or disclaimer with Applicants reserving the right to file a divisional application directed to the non-elected subject matter.

Additionally, the Examiner indicated on page 8 of the Office Action, that "Claims 42, 43, 67-69, 73 and 74 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten or amended limiting the scope to the examined subject matter".

## 3. Summary of the Amendments

Please cancel Claims 40-41, 44-45, 50-63, and 70 without prejudice or disclaimer.

Claim 42, previously dependent on Claim 40, has been amended to be an independent claim. Values defined in Claim 40, on which Claim 42 was previously dependent, have been added to Claim 42. In the amended claim, "Q is -CR<sup>5</sup>R<sup>6</sup>- wherein Q is attached to each phenyl ring in a para position relative to the oxygen atom attached to each phenyl ring". Support for this amendment may be found, for example, in "preferred compounds of Formula 1" listed in Table 1, (specifically compounds 1, 3-5, 8, 9, 11, 18-20, 22, 23, 32, 34, 39, 40-42, 44-50, 54, 58, 59, 118, and 123-126) shown on pages 5-35 of the specification as filed; page 50, lines 8-11; page 50, bottom line, through page 51, line 1; and formulae VIII, XX and XXX of Figures 2-3. In amended Claim 42, R<sup>2</sup> is a covalent bond, support for which may be found, for example, in the specification in "preferred compounds of Formula 1" found on pages 5-35; and on page 41, lines 17-18.

Claims 43, 46-49, 64-67, and 71-73 have been amended to depend from Claim 42 instead of now canceled Claims 40 and 41.

In amended Claim 43, which now depends from Claim 42 instead of Claim 40, duplicates of values defined in Claim 42 have been deleted. Support for these amendments may be found, for example, in the "preferred compounds of Formula 1" shown in Table I found on pages 5-35 of the specification as filed.

Claims 46-49 have been amended to depend from Claim 42. Support for these amendments may be found on page 41, lines 6-11 and page 45, lines 13-18 of the specification as filed.

Claim 64 has been amended to depend from Claim 42, instead of Claim 41, and the values listed for "Y" have been amended to match formula II. Support for this amendment may be found on page 42, lines 17-24 and page 43, line 4 through page 45, line 12 of the specification.

Claims 65-67 have been amended to depend from Claim 42 instead of Claim 40, and is supported by page 46, lines 16-18.

Amended Claim 71, which now depends from Claim 42, includes structures of compounds 1, 3-5, 8, 9, 11, 18-20, 22, 23, 32, 34, 39, 40-42, 44-50, 54, 58, 59, 118, and 123-126 found in Table 1, on pages 5-35 of the specification as filed. Support for these amendments may be found, for example, on page 43, line 4, through page 45, line 12, and original Claim 36.

Claim 72 has been amended to be multiply dependent upon Claims 42, 43, 46-49, 64-69 and 71, and is supported by original Claim 37.

Claim 73 has been amended to depend from Claim 42. Support for this amendment can be found, for example, on page 5, lines 3-9, and original Claim 38.

No new matter has been added. Entry of the above amendments is respectfully requested.

# 4. Claim Rejection Under 35 U.S.C. §112, second paragraph

The Examiner rejected Claims 70 and 71 under 35 U.S.C. §112, second paragraph, as being indefinite. Specifically, the Examiner indicated that "Claim 70 refers to formulae disclosed in Figures 1-3 without reciting the formulae within the claim" and that Claim 71 refers to Table 1 in the disclosure, whereas "claims should have all limitations within the claim or should refer to other claims for the limitations."

For the following reasons, Applicants submit that this rejection has been obviated by the above amendments to the claims. Applicants have canceled Claim 70. Claim 71 has been amended to recite the structure of compounds 1, 3-5, 8, 9, 11, 18-20, 22, 23, 32, 34, 39, 40-42, 44-50, 54, 58, 59, 118, and 123-126 found in Table 1, pages 5-35 of the specification as filed.

Accordingly, withdrawal of this rejection is respectfully requested.

### 5. Claim Rejections Under 35 U.S.C. §102(e)

As the Examiner noted in the May 20, 2003 Office Action, this application is being examined under 35 U.S.C. §102(e) prior to the amendment by the American Inventors Protection Act of 1999 (AIPA).

Claims 40, 46-53, 55-58, 63, 65, 70 and 72 stand rejected under 35 U.S.C. §102(e) as being allegedly anticipated by Pastor et al., U.S. Patent Application Publication No.

(II)

Application No. <u>09/943,420</u> Attorney's Docket No. <u>P-097-R</u> Page 17

2002/0007585. In the above amendments, Claims 40, 50-53, 55-58, 63, and 70 have been canceled; therefore, the rejection of these claims is moot.

The remaining claims, i.e., Claims 46-49 and 72 have been amended to depend from Claim 42. Claim 42 was not rejected by the Examiner under 35 U.S.C. §102(e). Accordingly, since Claims 46-49 and 72 now depend from Claim 42, the rejection of these claims may be withdrawn.

More specifically, Pastor et al. teaches N-substituted aryloxyamines and a process of preparing such compounds. The structure of Example 42, specifically cited by the Examiner, 4,4'-bis[(4-hydroxy-2,2,6,6-tetramethylpiperindin-1-yl)oxy]diphenylmethane, is shown below.

Applicants draw the Examiner's attention to the oxygen atom directly bonded to the nitrogen of the piperidinyl ring in Pastor's compound. (All of the Pastur's 42 examples teach compounds having as a common feature an oxygen atom directly bonded to a nitrogen.)

In contrast, in Applicants' presently claimed invention is directed to compounds of Formula II:

$$(\mathbb{R}^{4})_{z}$$
 $(\mathbb{R}^{4})_{z}$ 
 $(\mathbb{R}^{4})_{z}$ 
 $(\mathbb{R}^{4})_{z}$ 
 $(\mathbb{R}^{4})_{z}$ 
 $(\mathbb{R}^{4})_{z}$ 

where R<sup>2</sup> is a covalent bond. In these compounds, the oxygen atom is bonded directly to a <u>carbon</u> atom of the heterocycle of Formula II. Since Pastor et al. does not teach or suggest such compounds, this reference cannot anticipate Applicants' presently claimed invention.

Accordingly, Applicants respectfully request that the rejection of Claims 46-49 and 72 under 35 U.S.C. 102(e) as being allegedly anticipated by Pastor et al., U.S. Patent Application Publication No. 2002/0007585, be withdrawn.

# 6. Claim Rejections Under 35 U.S.C. §102(b)

Claims 40, 46-53, 55-57, 63, 65, 70 and 72 have been rejected under 35 U.S.C. §102(b) as being allegedly anticipated by CAPLUS Abstracts 122:291731; 119:271792; 105:209781; 112:199166; and Murayama et al., U.S. Patent No. 3,904,581, (CAPLUS Abstract 84:5991). The Examiner alleges that "the instantly claimed compounds read on the reference disclosed compound," referring to the enclosed CAPLUS computer search reports.

Claims 40, 50-53, 55-57, 63, and 70 have been canceled; therefore, the rejection of these claims is moot. Claims 46-49 and 72 have been amended to depend from Claim 42 which was not rejected by the Examiner under 35 U.S.C. §102(b). Accordingly, since Claims 46-49 and 72 now depend from Claim 42, the rejection of Claims 46-49 and 72 under 35 U.S.C. §102(b) may be withdrawn.

More specifically, all of the references cited by the Examiner teach compounds having a phenyl group attached <u>via a nitrogen atom</u> to a heterocycle. Specifically, Furuya, CAPLUS Abstract 122:291731; Grenier-Loustalot et al., CAPLUS Abstract 119:271792; and Hergenrother et al., CAPLUS Abstract 105:209781; and Grenier-Loustalot et al., CAPLUS Abstract 112:199166; teach compounds of a core structure shown below:

where R is a either phenyl, an alkynyl-phenyl, or alkyl-phenyl, as defined in the individual reference.

Myrayama et al., CAPLUS Abstract 84:5991 and U.S. Patent 3,904,581 teaches a

4-aminopiperidine derivative of the following structure:

In contrast, Applicants' invention is directed to compounds having, among other differences, an oxygen atom linking a phenyl group to a heterocycle. The cited references, either alone or when combined, do not teach or suggest such compounds.

Accordingly, Applicants respectfully request that the rejection of Claims 46-49 and 72 under 35 U.S.C. §102(b) as being allegedly anticipated by CAPLUS Abstracts 122:291731; 119-271791; 105:209781; 112:199166; and Murayama et al., U.S. Patent No. 3,904,581, (CAPLUS Abstract 84:5991) be withdrawn.

#### 6. Allowable Subject Matter

The Examiner has indicated that Claims 42, 43, 67-69, 73 and 74 were "objected to as being dependent upon a rejected base claim, but would be allowable if rewritten or amended limiting the scope to the examined subject matter as indicated above". The examined subject matter included compounds of formula VIII:

$$(R^1)_w$$
  $Q$   $(R^1)_w$   $VIII$ 

wherein Q is  $-CH_2$ -, X is -O- or -NH-,  $R^2$  is a covalent bond; Y is optionally substituted pyrrolidine or piperidine; and w is 0 or 2.

Applicants have amended Claim 42 and its dependent claims such that Q is methylene or substituted methylene (-C R<sup>5</sup>R<sup>6</sup>) which is attached to the para position of each of the phenyl rings

with respect to -X-  $R^2$ -Y; X is -O-;  $R^2$  is a covalent bond; Y is an optionally substituted  $C_3$ - $C_6$  heterocycle containing one nitrogen heteroatom, i.e., azetidine, pyrrolidine, piperidine, or azepane; and w is independently 0, 1, 2, 3, or 4.

As stated in MPEP 803.02, "Should applicant in response to this rejection of the Markush-type claim, overcome the rejection, as by amending the Markush-type claim to exclude the species anticipated or rendered obvious by the prior art, the amended Markush-type claim will be reexamined. The prior art search will be extended to the extent necessary to determine patentability of the Markush-type claim." Although the definitions of Q, Y and "w" of amended Claim 42 differ slightly from the examined values, Applicants believe that searching the presently claimed subject matter will not prove an undue burden to the Examiner. Therefor, Applicants respectfully request examination of the claims as presently amended.

For the foregoing reasons, Applicants believe that all pending claims are now in condition for allowance. Should there be any remaining issues that can be resolved by telephone, the Examiner is invited to telephone Roberta Saxon, an agent of record for Applicants at (650) 808-3764, or the undersigned agent at (650) 808-6144.

Respectfully submitted,

U

THERAVANCE, INC. Attn: Legal Dept.

901 Gateway Boulevard

South San Francisco, CA 94080

Tel: (650) 808-6000; Fax: (650) 808-6078

Joyce Cohen., Reg. No. 44,622

OFFICIAL